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Blood Groups in Two Tribal Populations of Andhra Pradesh

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INTRODUCTION

The present paper reports the distribution of ABO and Rh(D) blood groups in two tribes namely, the Lambadas and the Chenchus of Mahaboobnagar district of Andhra Pradesh. The Lambadas or Banjaras or Sugalis are formerly a nomadic tribe, migrated from Rajasthan, originally cattle herders and traders, they now a days adopted an agricultural way of life. They are supposed to be of Caucasian origin. Whereas the Chenchus, on the other hand, one of the most primitive tribes of India, are agricultural labourers belonging to Protoaustraloid stock.

MATERIAL AND METHODS

A total of 120 blood samples (60 from Lambadas and 60 from Chenchus) were collected from unrelated adults of both sexes. Blood grouping was done by standard procedures. The gene frequencies were calculated after Mourant et al. (1976)

RESULTS AND DISCUSSION

The phenotype and allele frequencies for ABO blood group system in Lambadas and Chenchus are shown in table1. The blood group B predominates in Lambadas with highest frequency (45%) followed by A (23.3%) and O (20.0%), whereas in Chenchus O predominates with the highest frequency (40.0%) followed by A (33.4%) and B (23.3%). The AB blood group is much higher in Lambadas (11.7%) than Chenchus (3.3%). Concerning the allele frequencies, the Lambadas show the trend *ABO*O> ABO*B> ABO*A*, while the trend in Chenchus is *ABO*O> ABO*A> ABO*B*. Further the *ABO*O* allele is less frequent in Lambadas than in Chenchus.

Regarding ABO blood group system, a majority of tribal population in Andhra Pradesh shows a predominance of A blood group (Bhasin et al.,1992). Considering the allele frequencies, *ABO*A* allele ranges from 0.0941 in the tribe Yanadi (Reddy et al., 1982) to 0.3460 in Samanta (Naidu and Veerraju, 1977). *ABO*B* allele varies between 0.0975 in Savara to 0.3765 in Nooka Doora (Naidu et al., 1990).The *ABO*O* allele records the highest frequency of 0.7225 among Yerukula (Narahari, 1982) and lowest frequency of 0.4120 among Samanta (Naidu and Veerraju, 1977).

Thus the frequency for allele *ABO*A, ABO*B,* and *ABO*O* in Lambadas and Chenchus falls well with in the range of other tribal populations of Andhra Pradesh.

The phenotype and allele frequencies for Rh(D) blood group system in Lambadas and Chenchus are given in table 2. For Rh(D) system, the *Rh*d* allele records a higher frequency of 0.1414 in Lambadas while it is totally absent in Chenchus.

Regarding Rh(D) system, the *Rh*d* allele ranges between 0.1221 in Pradhan (Blake et al., 1981) and 0.3350 in Konda Kapu (Veerraju,

Table I: Phenotype and allele frequencies of ABO blood group system in Lambadas and Chenchus

	Lambadas		*Chenchus*	
Phenotype	*Number*	*Percentage*	*Number*	*Percentage*
ABO				
A	14	23.30	20	33.40
B	27	45.00	14	23.30
O	12	20.00	24	40.00
AB	7	11.70	2	3.30
Total	60	100.00	60	100.00
Allele				
*ABO*A*	0.1952		0.2000	
*ABO*B*	0.3468		0.1472	
*ABO*O*	0.4581		0.6506	

Table2: Phenotype and allele frequencies of Rh blood group system in Lambadas and Chenchus

	Lambadas		*Chenchus*	
Phenotype	*Number*	*Percentage*	*Number*	*Percentage*
Rh(D)				
D	59	98.30	60	100.00
D	1	1.70	0	0.00
Total	60	100.00	60	100.00
Allele				
*Rh*D*		0.8586		1.0000
*Rh*d*		0.1414		0.0000

1988).The frequency for Rh(D) allele in Lambadas is in agreement with other tribal populations of Andhra Pradesh, where as in Chenchus an absence of *Rh*d* allele was observed.

From this for going account it may be persumed that the difference for both ABO and Rh(d) systems between the Lambadas and Chenchus clearly reflect their different racial origin.

KEY WORDS Blood Groups. Tribes . Andhra Pradesh.

ABSTRACT Phenotype and allele frequencies for ABO and Rh(D) blood groups in two tribal populations, namely, the Lambadas and the Chenchus, from Andhra Pradesh are reported here.

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